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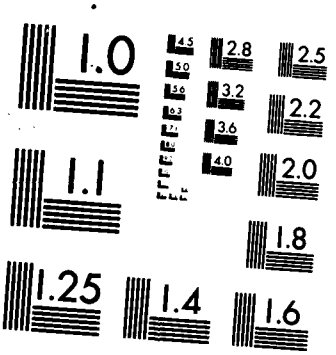

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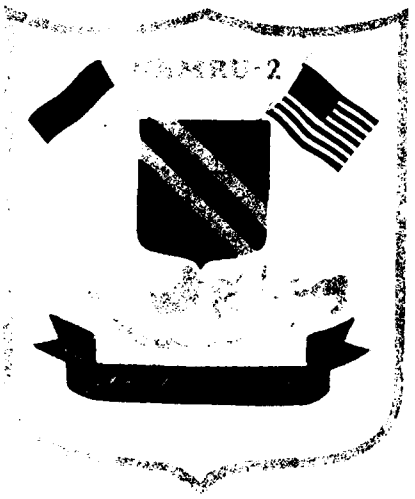
CHIKUNGUNYA FEVER AMONG U.S. PEACE CORPS VOLUNTEERS - REPUBLIC OF THE PHILIPPINES

C.G. Hayes, T. O'Rourke and A. Sarr

REPORT NO. TR - 1017



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APO SAN FRANCISCO, CALIFORNIA 96528

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Three cases of chikungunya fever were diagnosed recently among U.S. Peace Corps volunteers stationed in the Republic of the Philippines. These are the first cases reported from the Philippines since 1968. All three cases were diagnosed using an IgM antibody-capture exnzyme-linked immunosorbent assay (ELISA).

The cases were diagnosed as part of a collaboratoive long-term infectious disease study by the U.S. Naval Medical Research Unit No. 2 and the U.S. Peace Corps in the Philippines.

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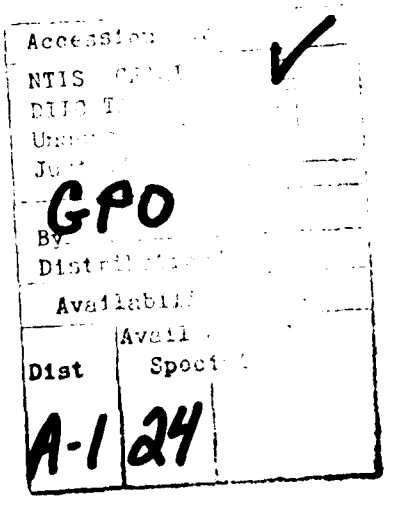

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International Notes

Chikungunya Fever among U.S. Peace Corps Volunteers — Republic of the Philippines

Three cases of chikungunya fever were diagnosed recently among U.S. Peace Corps volunteers stationed in the Republic of the Philippines. These are the first cases reported from the Philippines since 1968. The cases were diagnosed as part of a collaborative long-term infectious disease study by the U.S. Naval Medical Research Unit No. 2 and the U.S. Peace Corps in the Philippines.

The first patient, a 27-year-old male, was stationed in Mindanao, one of the southernmost islands of the Philippine archipelago. His illness occurred in June 1985 but was not diagnosed until October 1985. The second case occurred mid-November 1985 in a 31-year-old female stationed on Cebu, one of the islands that forms the central portion of the archipelago. The third case occurred in January 1986 in a 23-year-old female stationed on the island of Masbate, also in the central part of the country but north of Cebu.

Chikungunya Fever – Continued

All three cases were diagnosed using an IgM antibody-capture enzyme-linked immunosorbent assay (ELISA). Chikungunya virus was isolated from a blood sample obtained from one of the patients 3 days after onset of fever. The clinical presentations were typical of chikungunya fever and included acute onset of high fever, severe joint pain, and skin rash. The illnesses persisted 3-7 days, and all patients recovered uneventfully.

Chikungunya virus may have been introduced into the southern Philippines from Indonesia. The first case detected in the Philippines occurred in an area of Mindanao, Davao del Sur, which is approximately 200 km north of central Indonesia; the area is reportedly frequently visited by Indonesian traders and fishermen.

The full extent of epidemic activity in the Philippines is not known. One of the Peace Corps volunteer patients reported many cases of a chikungunya-like illness (locally termed "Chinese fever" or "Asian flu") in the Filipino population of the village where she lived. The potential for widespread activity is present because of the large population of susceptibles and the abundance of the vector, *Aedes aegypti*, particularly in large urban areas like Manila.

Reported by CG Hayes, PhD, T O'Rourke, MD, U.S. Naval Medical Research Unit No. 2; A Sarr, US Peace Corps, Philippines; Div of Vector-Borne Viral Diseases, Center for Infectious Diseases, CDC.

Editorial Note: The word "chikungunya" is Swahili for "that which bends up," in reference to the stooped posture of patients afflicted with the severe joint pain associated with this disease. The disease was first recognized in epidemic form in East Africa in 1952-1953 (*1*). The etiologic agent, chikungunya virus, is arthropod-borne and has been placed in the family Togaviridae, genus *Alphavirus* (*2*). Human infections are acquired by the bite of infected *A. aegypti* mosquitoes, and epidemics are sustained by human-mosquito-human transmission. The epidemic cycle is thus similar to those of dengue and urban yellow fever.

Since 1954, the virus has been implicated as the cause of epidemics in Asian countries including the Philippines, Thailand, Cambodia, Vietnam, India, Burma, and Sri Lanka. Epidemics of chikungunya were documented in the Philippines in 1954, 1956, and 1968 (*3-4*). Serosurveys suggest that virus activity occurred in the central and southern part of the archipelago (*5*). Chikungunya virus has been isolated from humans and mosquitoes in eastern, southern, western, and central Africa and in southeastern Asia, where it has been responsible for illnesses in hundreds to thousands of individuals.

Chikungunya fever is characterized by sudden onset, chills and fever, headache, nausea, vomiting, arthralgia, and rash. In contrast to dengue, chikungunya is characterized by a briefer febrile episode, by persistent arthralgia in some cases, and by the absence of fatalities. However, similarities between clinical appearances of the two diseases probably account for misclassification and some underreporting of chikungunya fever in areas with endemic dengue; therefore, laboratory confirmation of reported cases is important. The IgM-capture ELISA used for diagnosis of these patients is especially useful in this regard (*6*).

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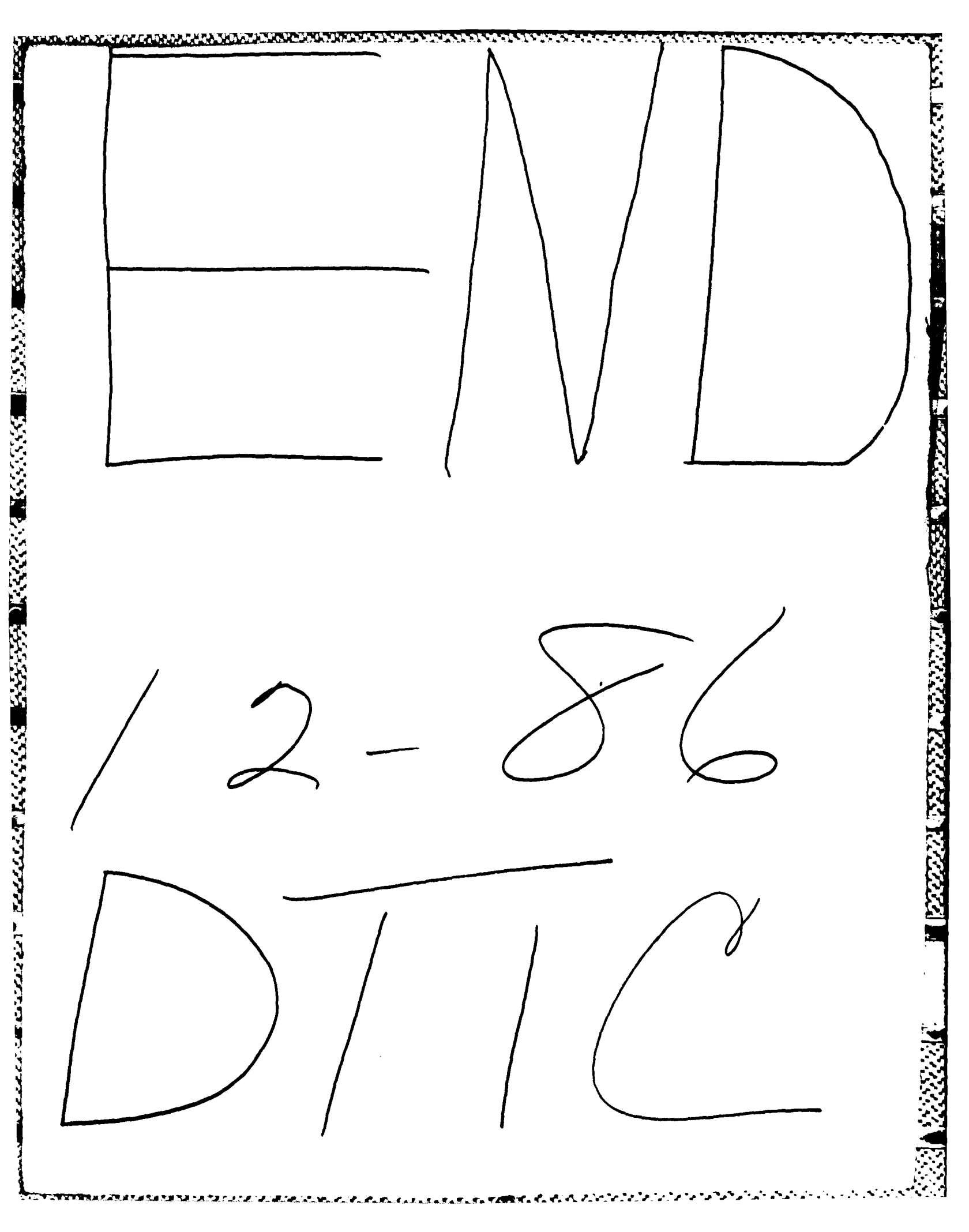
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